Wastewater System Financial Plan

For the Corporation of the City of Thunder Bay



Prepared January 2015

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Executive Summary

The City of Thunder Bay revised its Capital Financing and Debt Policy in 2014. Corporate Report No. 2014.019 (Accounting & Budgets) outlined a Corporate Debt Management Strategy that included the development of a long-term financial plan for Wastewater before the end of 2014.

The Wastewater long-term financial plan outlines the projected operating and capital plan for the next 20 years, with the goal of achieving financial sustainability, full-cost recovery and affordability for consumers while maintaining the City's existing service levels for sewage collection and treatment. The forecast demonstrates that these goals have been met through a combination of limiting increases in the sewer surcharge rate and the issuance of new debt.

Assumptions

In developing the Wastewater long-term financial plan a number of key assumptions were used:

- User Fees the sewer surcharge rate, currently 75% of water rates for 2014 increases to 90% in 2015 and water rates increase as outlined in the Water Authority Financial Plan, approved in 2013;
- Operating costs increase by 2.5% annually;
- Administrative interdepartmental charges applied annually to wastewater by supporting areas (such as Accounts Receivable, Fleet, Stores, Cashiers, Corporate Information Technology, etc.,) are expected to be controlled at an increase of 2.5% annually;
- Utilities costs increase by 7.0% annually until 2017 and 2.5% thereafter;
- Annual operating expenses including interest and principal repayments on long-term debt reach \$20 million by 2021 and increase gradually thereafter;
- Capital requirements continue to be made in accordance with the Environment Division's current asset management plans with \$167.1 million expected to be spent through 2034 on wastewater capital infrastructure and \$10.4 million for the construction of storm sewers as part of the Pollution Prevention Control Plan, including an increase of 1.9% annually for inflation;
- Debt financing of \$53.5 million through 2034 is required to meet infrastructure demands due to the capital intensive nature of the operations and long life of the related assets;
- The debt service ratio target for Wastewater operations should not exceed 30% and the upper limit target should be 15% in future years, as approved in the Corporate Debt Management Strategy.

The projected Statement of Operations for the years 2014 through 2034 is included in Appendix A. Given the projections are based on a number of assumptions, actual results may vary significantly from projections and therefore it is important to monitor annual results and compare them to the long-term financial plan.

Introduction

Currently, there is no long-term financial plan for Wastewater operations. As part of the Debt Management Strategy outlined in Corporate Report No. 2014.019 (Accounting & Budgets), it was recommended that a long-term financial plan for rate-supported Wastewater operations to support borrowing requests be completed in 2014.

The goal in developing the Wastewater long-term financial plan is to achieve financial sustainability of the operations while striking a balance between limiting sewer surcharge rate increases and debt levels in order to continue providing sewage collection and treatment services to the City. These goals have been met as demonstrated in the 20 year forecast (through 2034) in Appendix A.

It is important to note that the management of stormwater in the City currently receives significant funding through the sewer surcharge rate. Development of a Stormwater Master Plan is underway and a preferred Financing Strategy and potential funding sources for allocating stormwater program costs will be recommended. Upon approval of the Financing Strategy recommended under the Stormwater Master Plan, the Wastewater long-term financial plan will be revised accordingly.

Sewer Surcharge Rate

Wastewater billings are based on a sewer surcharge rate (75% in 2014) on water consumption and access charges. As noted in the 2013 Water Authority Financial Plan (bain smith business valuation + consulting inc.), it is assumed that water consumption will continue to decline by 4% in 2014, 3% in 2015, 2% in 2016, 1% in 2017 and become stable in 2018 at approximately 10.7 million cubic metres. The new water rates approved in the 2013 Water Authority Financial Plan continue to be affordable over the long term.

The wastewater operations do not rely on the use of municipal tax dollars. However, in order to obtain financial sustainability over the long term, an increase in the sewer surcharge rate is necessary to cover the cost of operations and capital infrastructure renewal requirements.

At present, approximately 10% of the funds collected through the sewer surcharge rate are spent on stormwater operating and capital programs.

Debt

The Capital Financing and Debt Policy governs the use and administration of capital financing and debt. Borrowing for wastewater infrastructure is often at higher levels than tax-supported assets and over longer terms (20 years) reflecting the long life of these types of assets. Therefore, higher debt service ratio targets are generally adopted for operations of this nature. The Debt Management Strategy recommended that the debt service ratio target for Wastewater operations not exceed 30% and that efforts be made to achieve an upper limit of 15% in future years.

Current debt outstanding (\$31 million) represents financing for the Water Pollution Control Plant Secondary Treatment Expansion, addition of Ultraviolet (UV) Light Disinfection and the construction of the Cogeneration Plant with a debt service ratio of 26% expected for 2014. It is anticipated that additional debt of \$53.5 million through 2034 will be required to fund capital infrastructure renewals. Debt service ratios are projected to remain above 20% through 2024 after which it is projected that the ratio will decline from 18.3% to 9.5% from 2025 through 2034.

Environment Division - Wastewater Operations

The Environment Division within the Infrastructure and Operations Department is responsible for wastewater collection and treatment in an environmentally conscious manner. Through the City's Atlantic Avenue Water Pollution Control Plant, primary and secondary treatment, phosphorus and ammonia removal and anaerobic sludge digestion is provided. The wastewater treatment and collection system consists of:

- 1 Wastewater Treatment Plant
- 4 Wastewater Pumping Stations
- 516 Kilometres of Collection Mains
- 33,769 Service Connections
- 5,931 Manholes

In addition, operational and maintenance activities for the following stormwater infrastructure is funded from the sewer surcharge rate:

- 5 Stormwater Pumping Stations
- 320 Kilometres of Storm Collection Mains
- 373 Outlets to Receiving Waters
- 2 Stormwater Detention Ponds
- 11,010 Catchbasins
- 4,184 Manholes
- 1 Boulevard Lake Dam

The Infrastructure and Operations Department is committed to continual improvement of wastewater operations. In 2013, the wastewater treatment plant processed an average of 82 million litres per day of influent; generating a total of ~1.7 million cubic metres of digester gas and 9,377 tonnes of biosolids. The majority of the digester gas (96%) was consumed by the plant's cogeneration system to produce electricity and hot water that was used throughout the facility to reduce energy costs. In 2013 and 2014, a number of initiatives were completed and aimed at reducing overall electrical consumption. Annual savings of over 2 million kW per year are expected as a result.

A detailed summary of plant operations, processes, capital projects and the Ontario Ministry of the Environment's requirements in terms of compliance limits and objectives is available and published annually as part of the City of Thunder Bay's "Wastewater Treatment Annual Report".

Operating Budget

Wastewater's operating budget includes the costs of day-to-day operations in administering the sewage collection and treatment system for the City. This includes maintenance of linear assets in the wastewater collection system, operational costs for the Atlantic Avenue Water Pollution Control Plant, lab services, and \$1.1M of the City's stormwater operating costs. The majority of operating costs are

made up of personnel services, utilities, and materials including maintenance and parts and supplies. Per the 2014 Wastewater budget, operating expenses were budgeted at \$16.6 million including interest and principal repayments on long term debt.

A number of assumptions on operating expenses included in the projections are consistent with the 2013 Water Authority's Financial Plan. All operating expenses are assumed to increase by 2.5% annually through 2034 while utilities are expected to increase by 7% annually through 2017 and 2.5% thereafter. More details on the operating expenses are included in the projected Statement of Operations in Appendix A.

Recent changes to the operating budget include expected increased energy costs for the recently constructed pumping station at Prince Arthur's Landing. Operational costs for this station will increase as buildings become occupied and further development takes place. The wastewater treatment operations were expanded to provide a 24 hour operator shift rotation, 7 days per week. In order to implement the shift, additional operational staff was hired in 2013 to fulfill the new schedule. Further, additional resources have been assigned for the development of a city wide Stormwater Master Plan, various storm system programs and to further study sewer system performance.

Capital Budget

As indicated in the City's comprehensive Asset Management Plan ("AMP"), the following table outlines the City's sanitary sewer network assets.

Sanitary Sewer Inventory													
Asset Type	Asset Sub-Type	Quantity											
	Sewers less than or equal to 600mm	450,425.88 m											
	Sewers greater than 600 mm	66,059.00 m											
Sanitary	Total Sewers	516,484.88 m											
Sanitary	Relining	Pooled assets											
	Water Pollution Control Plant	1											
	Pumping Stations	4											

Per the AMP, this data was extracted from the City's GIS database and the Environment Division's October 2009 Asset Management Report: "Capital Planning Study Report, Phase 2 – Sewage System" then input into the CityWide Solutions software for further analysis.

Wastewater's annual capital budget reflects the proper maintenance and upgrading to the assets outlined in the table. Sewer main rehabilitation and replacement is conducted based on inspections and noted defects, while plant and pumping station maintenance varies based on the components. In some cases, minor maintenance occurs regularly and major maintenance on process equipment occurs annually. Rehabilitation at the plant and pumping stations occurs annually also.

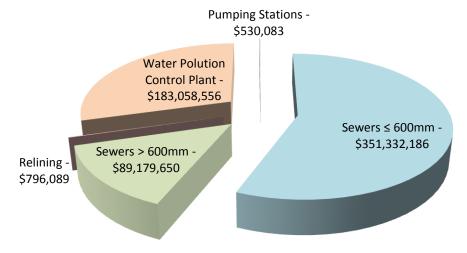
Future capital costs included in the projections have been provided by the Environment Division and have been increased by 1.9% annually for inflation. Annual capital expenses for sanitary sewer system renewal/rehabilitation will increase over time from \$1 million in 2015 to \$4.6 million in 2021. Through

2034 there is no expectation of any large, one-time capital costs. Per the projected Statement of Operations, approximately \$5.5 million of wastewater capital expenses are expected to be incurred annually through 2020, while in 2021 and 2022 wastewater capital expenses are expected to be approximately \$11 million each year due in part to the need to replace aging emergency power generators (3) at the Plant resulting in an additional \$5.5 million spread out over these two years. From 2023 to 2034, wastewater capital expenses increase from \$7.9 million annually to \$9.7 million including inflation.

The Pollution Prevention Control Plan project is currently included in the wastewater capital budget but the nature of the project includes the construction of new storm sewers in areas where combined storm sewers exist. It is projected that the remaining 13 km of storm/sanitary separation will cost \$10.4 million and be completed by 2020. All other storm sewer capital projects included in this projection are tax supported capital and therefore the offsetting capital out of revenue has also been included in the estimates so these projects do not have an impact on wastewater rates.

The replacement value of the sanitary sewer network assets in 2013 dollars totals \$625 million, with the replacement cost based on the bid analysis average for sanitary sewer replacement and restoration, and insurance values for plant and pumping stations. The following chart demonstrates the breakdown of the replacement values:

Sanitary Sewer Replacement Value (2013 Dollars)



Debt Financing

Given the very capital-intensive nature of Wastewater operations and the long life expectancy of Wastewater assets, it is appropriate that the City incur debt financing to fund a portion of future capital expenditures. While debt increases the cost of a project, debt financing can also help address the costs associated with deferring capital infrastructure maintenance and upgrading.

Furthermore, one of the key concepts in the Ontario Ministry of Infrastructure's Municipal Infrastructure Strategy is "intergenerational equity" which refers to shifting the burden of infrastructure investments across the generations that benefit from that infrastructure.

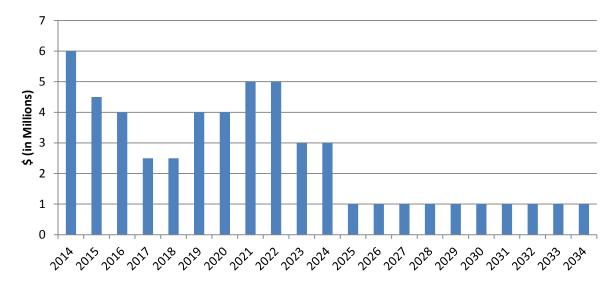
Up until now, funding for wastewater capital expenditures has relied heavily upon the wastewater reserve fund. Given the significant capital investments over the past few years, this has resulted in a diminished reserve fund balance. The long term financial plan proposes new debt to fund a portion of future capital infrastructure to help address this.

The City's existing debt represents financing for the Water Pollution Control Plant, UV and Cogeneration Plant and the current balance of debt outstanding is \$31 million. Included in this long term financial plan, additional debt of \$53.5 million through 2034 will be required to fund capital infrastructure renewals. Total outstanding debt will be highest in 2022 at approximately \$38.7 million and begin to decrease each year reaching \$20 million by 2034.

New debt in 2014 and 2015 is proposed to be at higher amounts than future years representing the need to address the significant capital expenditures incurred over the past few years. In 2017, new debt levels drop to \$2.5 million and increase gradually up to \$5.0 million in 2021 and 2022 due to increased capital needs and then drop again to \$1 million annually from 2025 through 2034. Where possible, maintaining consistent debt levels helps to maintain or smooth out cash outflows which, in turn, helps to maintain more consistent surcharge rates.

The following chart illustrates the projected annual new debt incurred through 2034:

Wastewater Annual New Debt



The Debt Management Strategy recommends that the debt service ratio target for Wastewater operations not exceed 30% and that efforts be made to achieve an upper limit of 15% in future years. Debt service ratios are projected to be highest in 2014 at 26.3% and remain above 20% through 2024

after which it is projected that the ratio will decline from 18.3% to 9.5% from 2025 through 2034. It is assumed that all new debt will be incurred over 20 year terms with semi-annual payments and an interest rate of 4% compounded semi-annually.

Sewer Surcharge Revenue

In order to cover the cost of operations and capital infrastructure requirements, sewer surcharge revenue is projected to increase to \$35.4 million by 2034 up from \$17.3 million in 2014. This increase is necessary to help achieve financial sustainability for Wastewater operations.

Currently, Wastewater billings are based on a sewer surcharge rate of 75% on water consumption and access charges. As indicated in the 2014 budget package it is expected that this surcharge rate will need to be increased in future years. At this time, the long term financial plan projects that the surcharge rate will increase to 90% in 2015 and remain at that level through 2034.

Affordability for Consumers

Sewer and water rates are considered affordable when the combined sewer and water costs are 4% of median household income. In Thunder Bay, estimated household average income was \$80,680 in 2013. Under this Plan, the residential water and wastewater costs for 200m³ are projected to total \$1,049 in 2015 which is equal to 1.3% of household income.

In comparing the proposed 2015 rates to municipalities in Ontario, in 2013 the cost for the same volume of water across Ontario ranged from \$328 to \$1,659 in Brampton and Georgian Bluffs respectively.

Thunder Bay rates for sewer and water services also include the costs associated with portions of the stormwater operating and capital programs. Approximately \$50 per year of the funds collected through each residential water and wastewater bill is allocated to fund existing stormwater program costs.

A water credit program in the amount of \$200 annually is available for low income seniors and low income persons with disabilities.

Reserve Balance

During the periods covered in the long term financial plan, there are some years where it will be necessary to use funds accumulated in the reserve fund to finance capital expenditures when operating revenues in the same period are not sufficient to fund both operating and capital expenses of that year.

However, based on the assumptions used in the projections, by 2034 the City's Wastewater operations will accumulate a reserve fund balance of \$25.0 million that can be used for significant capital requirements.

The reserve fund balance begins to accumulate at a more rapid pace after 2026 reflecting the maturity of two large debentures for the Water Pollution Control Plant that originated in 2004 (maturing in 2024) and 2005 (maturing in 2025) in the amounts of \$20 million and \$23 million respectively.

Summary

The Wastewater long term financial plan was developed to demonstrate the projected operating and capital needs of Wastewater operations over the next 20 years to support revenue requirements and borrowing requests. The plan was developed with the goal of achieving financial sustainability, full-cost recovery and affordability for consumers while maintaining the City's existing service levels for sewage collection and treatment. The forecast demonstrates that these goals have been met through of combination of limiting increases in the sewer surcharge rate and the issuance of new debt in order to maintain appropriate debt service ratios.

The projected Statement of Operations is included in Appendix A. Given the projections are based on a number of assumptions, actual results may vary significantly from projections. Therefore it is important to monitor annual results and compare them to the long-term financial plan as well as update the plan accordingly should there be any potential changes to the assumptions used in the projections.

References

Asset Management Plan for the Corporation of the City of Thunder Bay - Road Network, Sidewalk Network, Bridges & Culverts, Water Distribution Network, Sanitary Sewer Network, Storm Sewer Network, Facilities and Fleet, 2014 Version 2

BMA Municipal Study 2014

City of Thunder Bay Wastewater Treatment Annual Report, 2013

City of Thunder Bay Water Authority Financial Plan 2013 – Financial Plan #024-301 (bain smith business valuation + consulting inc.)

Debt Management Strategy, Corporate Report No. 2014.019, January 2014

Appendix A – Projected Statement of Operations

		Total																				
	Note	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenue																						
Wastewater - Operating																						
Sewer Surcharge	1	17,184,400	20,702,326	21,099,622	21,619,631	22,268,201	22,936,247	23,624,334	24,333,064	25,063,056	25,814,948	26,589,396	27,387,078	28,208,690	29,054,951	29,926,599	30,824,397	31,749,129	32,701,603	33,519,143	34,357,122	35,216,050
Other Metered Sewage	1	78,400	80,752	83,175	85,670	88,240	90,887	93,614	96,422	99,315	102,294	105,363	108,524	111,780	115,133	118,587	122,145	125,809	129,583	133,470	137,474	141,598
Program Revenue	1	127,200	131,016	134,946	138,995	143,165	147,460	151,883	156,440	161,133	165,967	170,946	176,075	181,357	186,797	192,401	198,173	204,119	210,242	216,549	223,046	229,737
Other		180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000
Total Wastewater	_	17,570,000	21,094,094	21,497,743	22,024,296	22,679,606	23,354,594	24,049,831	24,765,926	25,503,504	26,263,209	27,045,705	27,851,677	28,681,827	29,536,881	30,417,587	31,324,715	32,259,057	33,221,428	34,049,162	34,897,642	35,767,385
Stormwater	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Stormwater		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue	_	17,570,000	21,094,094	21,497,743	22,024,296	22,679,606	23,354,594	24,049,831	24,765,926	25,503,504	26,263,209	27,045,705	27,851,677	28,681,827	29,536,881	30,417,587	31,324,715	32,259,057	33,221,428	34,049,162	34,897,642	35,767,385
Evenese																						
Expenses																						
Wastewater	2	2 040 020	2.026.044	4.025.262	4.426.444	4 220 540	4 245 527	4 45 4 475	4 505 530	4 670 667	4 700 050	4.046.575	F 020 400	E 46E 476	F 204 C42	F 426 070	F FC2 CF2	F 704 740	5.044.264	F 000 200	6 4 4 0 4 2 7	c 202 c20
Personnel Services Interdepartmental Charges	2	3,840,820	3,936,841	4,035,262	4,136,144	4,239,548	4,345,537	4,454,175	4,565,529	4,679,667	4,796,659	4,916,575	5,039,489	5,165,476	5,294,613	5,426,978	5,562,652	5,701,718	5,844,261	5,990,368	6,140,127	6,293,630
Administrative	2	819,000	839,475	860,462	881,974	904,023	926,624	949,790	973,535	997,873	1,022,820	1,048,391	1,074,601	1,101,466	1,129,003	1,157,228	1,186,159	1,215,813	1,246,208	1,277,363	1,309,297	1,342,029
Utilities	3	2.219.380	2.374.737	2.540.969	2,718,837	2.786.808	2.856.478	2,927,890	3,001,087	3,076,114	3,153,017	3,231,842	3,312,638	3,395,454	3,480,340	3,567,349	3,656,533	3,747,946	3,841,645	3,937,686	4,036,128	4,137,031
Insurance	2	126,000	129,150	132,379	135,688	139,080	142,557	146,121	149,774	153,518	157,356	161,290	165,322	169,455	173,691	178,033	182,484	187,046	191,722	196,515	201,428	206,464
Fleet	2	193,600	198,440	203,401	208,486	213,698	219,040	224,516	230,129	235,882	241,779	247,823	254,019	260,369	266,878	273,550	280,389	287,399	294,584	301,949	309,498	317,235
Engineering	2	186,100	190,753	195,522	200,410	205.420	210,556	215,820	221,216	226,746	232.415	238,225	244,181	250,286	256,543	262,957	269,531	276,269	283,176	290,255	297,511	304.949
Landfill	2	474,300	486,158	498,312	510,770	523,539	536,627	550,043	563,794	577,889	592,336	607,144	622,323	637,881	653,828	670,174	686,928	704,101	721,704	739,747	758,241	777,197
Utility Cuts	2	310,000	317,750	325,694	333.836	342.182	350,737	359,505	368.493	377,705	387.148	396,827	406.748	416,917	427,340	438.024	448.975	460,199	471,704	483.497	495,584	507.974
Other and Recoveries	2	431,480	442,267	453,324	464,657	476,273	488,180	500,385	512,895	525,717	538.860	552,332	566,140	580,294	594.801	609,671	624,913	640,536	656,549	672,963	689,787	707,032
Interest on Long-Term Debt	7	1,035,700	1,148,291	1,205,052	1,231,954	1,232,585	1,253,573	1,305,980	1,369,746	1,447,096	1,475,481	1,455,775	1,391,065	1,306,059	1,243,995	1,194,901	1,143,696	1,089,875	1,034,308	976.847	917,060	855,927
S	7	3,702,200	4,002,200	3,747,200	3,467,200	3,467,200	3,592,200	3,717,200	3,917,200		4,367,200	4,617,200	3,767,200	2,767,200	2,225,000	2,275,000	2,325,000	2,375,000	2,425,000	2,475,000	2,525,000	2,575,000
Long Term Debt Principal Repayment Materials	2	1,577,600	1,617,040	1,657,466	1,698,903	1,741,376	1,784,910	1,829,533	1,875,271	4,117,200 1,922,153	1,970,207	2,019,462	2,069,949	2,121,698	2,223,000	2,275,000	2,323,000	2,341,958	2,423,000	2,460,520	2,523,000	2,585,084
	=																, ,					
Municipal Taxes	2	498,600 241,000	511,065 247,025	523,842	536,938	550,361 266,019	564,120	578,223 279,486	592,679 286,473	607,496	622,683 300,976	638,250 308,500	654,206 316,213	670,561	687,325	704,508 340,527	722,121 349,040	740,174 357,766	758,678 366,710	777,645 375,878	797,086	817,013 394,907
Purchased Services	2		247,025	253,201	259,531	266,019	272,669	279,486	286,473	293,635	300,976	308,500	316,213	324,118	332,221	340,527	349,040	357,766	366,710	3/5,8/8	385,275	394,907
Other	_	2,148,000	45 444 400	45 522 005	46 705 000	47.000.440	47.540.000	40.000.557	40.507.004	40.000.004	40.050.007	20 420 525	40.004.004	40.467.004	40.040.040	40.000.000	40 700 050	20.425.000	20 526 756	20.055.222	24 204 255	24.024.472
Total Wastewater		17,803,780	16,441,192	16,632,086	16,785,328	17,088,112	17,543,808	18,038,667	18,627,821	19,238,691	19,858,937	20,439,636	19,884,094	19,167,234	18,940,318	19,328,009	19,723,258	20,125,800	20,536,756	20,956,233	21,384,055	21,821,472
Stormwater																						
Personnel Services	2	296,380	303,790	311,385	319,170	327,149	335,328	343,711	352,304	361,112	370,140	379,394	388,879	398,601	408,566	418,780	429,250	439,981	450,981	462,256	473,812	485,657
Interdepartmental Charges																						
Administrative	2	91,000	93,275	95,607	97,997	100,447	102,958	105,532	108,170	110,875	113,647	116,488	119,400	122,385	125,445	128,581	131,796	135,091	138,468	141,930	145,478	149,115
Utilities	3	46,120	49,348	52,802	56,498	57,910	59,358	60,842	62,363	63,922	65,520	67,158	68,837	70,558	72,322	74,130	75,983	77,883	79,830	81,826	83,872	85,969
Insurance	2	4.100	4,203	4,308	4,416	4,526	4,639	4,755	4.874	4,996	5,121	5,249	5,380	5,515	5,653	5,794	5,939	6.087	6,239	6,395	6,555	6,719
Fleet	2	43,400	44,485	45,597	46,737	47,905	49,103	50,331	51,589	52,879	54,201	55,556	56,945	58,369	59,828	61,324	62,857	64,428	66,039	67,690	69,382	71,117
Engineering	2	2,100	2,153	2,207	2,262	2,319	2,377	2,436	2,497	2,559	2,623	2,689	2,756	2,825	2,896	2,968	3,042	3,118	3,196	3,276	3,358	3,442
Landfill	2	31,500	32.288	33.095	33,922	34,770	35.639	36.530	37.443	38.379	39.338	40,321	41,329	42.362	43,421	44.507	45,620	46.761	47,930	49.128	50,356	51,615
Other	2	111,420	114,206	117,061	119,988	122,988	126,063	129,215	132,445	135,756	139,150	142,629	146,195	149,850	153,596	157,436	161,372	165,406	169,541	173,780	178,125	182,578
Materials	2	106,100	108,753	111,472	114,259	117,115	120,043	123,044	126,120	129,273	132,505	135,818	139,213	142,693	146,260	149,917	153,665	157,507	161,445	165,481	169,618	173,858
Purchased Services	2	353.400	362,235	371,291	380.573	390.087	399.839	409.835	420.081	430.583	441.348	452.382	463.692	475.284	487.166	499.345	511.829	524.625	537.741	551.185	564.965	579,089
Total Stormwater	² <u> </u>	1,085,520	1,114,736	1,144,825	1,175,822	1,205,216	1,235,347	1,266,231	1,297,886	1,330,334	1,363,593	1,397,684	1,432,626	1,468,442	1,505,153	1,542,782	1,581,353	1,620,887	1,661,410	1,702,947	1,745,521	1,789,159
Total Stormwater		1,083,320	1,114,730	1,144,023	1,173,022	1,203,210	1,233,347	1,200,231	1,237,000	1,550,554	1,303,333	1,337,004	1,432,020	1,400,442	1,303,133	1,542,762	1,361,333	1,020,887	1,001,410	1,702,547	1,743,321	1,765,155
Total Operating Expenses	_	18,889,300	17,555,928	17,776,911	17,961,150	18,293,328	18,779,155	19,304,898	19,925,707	20,569,025	21,222,530	21,837,320	21,316,720	20,635,676	20,445,471	20,870,791	21,304,611	21,746,687	22,198,166	22,659,180	23,129,576	23,610,631
Total Operating Surplus Subtotal		(1,319,300)	3,538,166	3,720,832	4,063,146	4,386,278	4,575,439	4,744,933	4,840,219	4,934,479	5,040,679	5,208,385	6,534,957	8,046,151	9,091,410	9,546,796	10,020,104	10,512,370	11,023,262	11,389,982	11,768,066	12,156,754
Transfer from Capital	5	454,700	227,300	231,619	236,019	240,504	245,073	249,730	254,475	259,310	264,237	269,257	274,373	279,586	284,898	290,311	295,827	301,448	307,175	313,012	318,959	325,019
Total Operating Surplus/(Deficit)	_	(864,600)	3,765,466	3,952,451	4,299,165	4,626,782	4,820,512	4,994,663	5,094,693	5,193,789	5,304,916	5,477,642	6,809,329	8,325,737	9,376,309	9,837,108	10,315,932	10,813,818	11,330,438	11,702,994	12,087,025	12,481,773

The Corporation of the City of Thunder Bay Environment Division - Wastewater Operations Projected Statement of Operations For the years ended December 31, 2014 to 2034

For the years ended December 31, 2014 to 2034																						
		Total																				
	Note	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Sources of Capital Financing																						
Wastewater																						
Federal Gas Tax		2,500,000	195,000																			
Grants		62,300	725,000																			
Federal Gas Tax - carryforward		730,964																				
Local Improvement Fees - carryforward		5,512																				
Grants - carryforward		138,702																				
New Debt	_	6,000,000	4,500,000	4,000,000	2,500,000	2,500,000	4,000,000	4,000,000	5,000,000	5,000,000	3,000,000	3,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
		9,437,478	5,420,000	4,000,000	2,500,000	2,500,000	4,000,000	4,000,000	5,000,000	5,000,000	3,000,000	3,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Stormwater																						
Capital out of Revenue	4	1,987,700	3,760,110	4,755,693	5,586,714	5,266,976	5,367,048	5,469,022	5,572,933	5,678,819	5,786,717	5,896,664	6,008,701	6,122,866	6,239,200	6,357,746	6,478,543	6,601,635	6,727,066	6,854,881	6,985,123	7,117,841
Total Sources of Capital Financing	=	11,425,178	9,180,110	8,755,693	8,086,714	7,766,976	9,367,048	9,469,022	10,572,933	10,678,819	8,786,717	8,896,664	7,008,701	7,122,866	7,239,200	7,357,746	7,478,543	7,601,635	7,727,066	7,854,881	7,985,123	8,117,841
Capital Expenses																						
Wastewater																						
WPCP	5	2,630,000	2,219,382	2,043,494	2,012,487	2,023,769	2,167,694	2,708,201	5,806,803	5,722,994	1,778,068	1,740,633	1,995,110	1,877,595	2,090,803	2,002,983	2,974,692	2,627,140	2,800,993	1,951,922	2,080,523	2,296,360
Sanitary Sewer	5	1,725,000	1,003,715	2,284,394	2,856,843	3,450,219	4,065,113	4,254,306	4,557,599	4,824,381	5,330,650	5,431,932	5,535,139	5,640,307	5,747,473	5,856,675	5,967,951	6,081,342	6,196,888	6,314,629	6,434,607	6,556,864
Fleet Replacement	5	410,000	336,270	332,276	63,485	271,705	-	302,280	171,124	215,063	485,681	277,632	307,508	601,633	21,713	295,437	-	621,648	275,417	140,325	142,991	473,551
Innovation, Programs & Technology	5	157,300	66,235	93,452	95,228	97,037	98,881	100,760	102,674	104,625	106,613	108,639	110,703	112,806	114,949	117,133	119,359	121,627	123,938	126,293	128,692	131,137
Network Expansion/Oversizing	5	50,000	50,950	51,918	52,904	53,910	54,934	55,978	57,041	58,125	59,229	60,355	676,517	62,670	63,861	65,074	66,311	67,570	68,854	70,163	71,496	72,854
Professional Fees	5 _	565,000	66,235	67,493	79,357	630,743	104,375	111,955	114,083	116,250	118,459	120,710	123,003	125,340	127,722	130,148	132,621	135,141	137,709	140,325	142,991	145,708
		5,537,300	3,742,787	4,873,027	5,160,304	6,527,383	6,490,997	7,533,480	10,809,324	11,041,438	7,878,700	7,739,901	8,747,980	8,420,351	8,166,521	8,467,450	9,260,934	9,654,468	9,603,799	8,743,657	9,001,300	9,676,474
Stormwater																						
Pollution Prevention Control Plan - Rate Supported	5	1,800,000	2,679,970	1,349,869	1,375,517	1,401,652	1,428,283	414,235	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Storm Sewers - Tax Supported	4	1,122,700	1,722,110	1,640,610	1,671,782	2,032,395	2,071,010	2,110,360	2,150,456	2,191,315	2,232,950	2,275,376	2,318,608	2,362,662	2,407,552	2,453,296	2,499,909	2,547,407	2,595,807	2,645,128	2,695,385	2,746,598
Stormwater Management - Tax Supported - EIRP	4 _	865,000	2,038,000	3,115,083	3,914,932	3,234,581	3,296,038	3,358,662	3,422,477	3,487,504	3,553,767	3,621,288	3,690,093	3,760,204	3,831,648	3,904,450	3,978,634	4,054,228	4,131,259	4,209,753	4,289,738	4,371,243
		3,787,700	6,440,080	6,105,562	6,962,231	6,668,628	6,795,331	5,883,257	5,572,933	5,678,819	5,786,717	5,896,664	6,008,701	6,122,866	6,239,200	6,357,746	6,478,543	6,601,635	6,727,066	6,854,881	6,985,123	7,117,841
Total Capital Expenses	_	9,325,000	10,182,867	10,978,589	12,122,535	13,196,011	13,286,328	13,416,737	16,382,257	16,720,257	13,665,417	13,636,565	14,756,681	14,543,217	14,405,721	14,825,196	15,739,477	16,256,103	16,330,865	15,598,538	15,986,423	16,794,315
Wastewater Capital Carryforward (over 3 years)	6	2,913,069	2,037,892	2,037,892																		
Total Capital Expenses		12,238,069	12,220,759	13,016,481	12,122,535	13,196,011	13,286,328	13,416,737	16,382,257	16,720,257	13,665,417	13,636,565	14,756,681	14,543,217	14,405,721	14,825,196	15,739,477	16,256,103	16,330,865	15,598,538	15,986,423	16,794,315
Capital Surplus (Shortfall) - Financed by:	=	(812,891)	(3,040,649)	(4,260,788)	(4,035,821)	(5,429,035)	(3,919,280)	(3,947,715)	(5,809,324)	(6,041,438)	(4,878,700)	(4,739,901)	(7,747,980)	(7,420,351)	(7,166,521)	(7,467,450)	(8,260,934)	(8,654,468)	(8,603,799)	(7,743,657)	(8,001,300)	(8,676,474)
Surplus		(012,031)	3,765,466	3,952,451	4,299,165	4,626,782	4,820,512	4,994,663	5,094,693	5,193,789	5,304,916	5,477,642	6,809,329	8,325,737	9,376,309	9,837,108	10,315,932	10,813,818	11,330,438	11,702,994	12,087,025	12,481,773
Reserve Balance		812.891	3,703,400	308.337	4,233,103	802,253	4,020,312	4,554,005	714.631	847.649	3,304,310	3,477,042	938.651	0,323,737	3,370,303	3,037,100	10,313,332	10,013,010	11,550,450	11,702,554	12,007,023	12,401,775
Overall Surplus/(Shortfall)	-	-	724,817	0	263,344	(0)	901,232	1,046,948	-	(0)	426,216	737,741	0	905,386	2,209,788	2,369,658	2,054,998	2,159,350	2,726,639	3,959,337	4,085,725	3,805,299
Reserve Balance																						
Balance, beginning of year		1,903,555	226,064	950,881	642,544	905,889	103,635	1,004,867	2,051,815	1,337,184	489,535	915,751	1,653,492	714,842	1,620,227	3,830,015	6,199,673	8,254,670	10,414,020	13,140,658	17,099,996	21,185,720
Cover Operating Deficit		(864,600)	220,004	550,001	3 /2,544	555,005	100,000	2,007,007	2,031,013	1,557,104	.55,555	313,731	1,000,702	, 17,072	1,020,227	3,030,013	0,233,073	3,234,070	10, 117,020	15,1 70,050	1.,055,550	21,103,720
Usage		(812,891)	-	(308,337)	-	(802,253)	_	-	(714,631)	(847,649)	-	_	(938,651)	-	_	-	-	-	-	-	-	-
Additions		-	724.817	0	263.344	(0)	901.232	1.046.948	-	(0)	426.216	737,741	0	905.386	2.209.788	2.369.658	2.054.998	2.159.350	2.726.639	3.959.337	4.085.725	3,805,299
Balance, end of year	8	226,064	950,881	642,544	905,889	103,635	1,004,867	2,051,815	1,337,184	489,535	915,751	1,653,492	714,842	1,620,227	3,830,015	6,199,673	8,254,670	10,414,020	13,140,658	17,099,996	21,185,720	24,991,020

Refer to Notes and Assumptions to Projected Statement of Operations The Corporation of the City of Thunder Bay Environment Division - Wastewater Operations Projected Statement of Operations For the years ended December 31, 2014 to 2034

Notes and Assumptions

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Note 1 Wastewater Rate Revenue																					
Wastewater nate nevenue	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Projected Water Rate Revenue Subject																					
to Sewer Surcharge	25,744,400	25,845,600	26,341,600	26,990,800	27,800,500	28,634,515	29,493,550	30,378,357	31,289,708	32,228,399	33,195,251	34,191,109	35,216,842	36,273,347	37,361,547	38,482,393	39,636,865	40,825,971	41,846,620	42,892,786	43,965,106
Increase Year over Year		0.4%	1.9%	2.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	2.5%	2.5%	2.5%
Sewer Surcharge @	75%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Only 89% of Water Billings subject																					
to Sewer Surcharge	17,184,400	20,702,326	21,099,622	21,619,631	22,268,201	22,936,247	23,624,334	24,333,064	25,063,056	25,814,948	26,589,396	27,387,078	28,208,690	29,054,951	29,926,599	30,824,397	31,749,129	32,701,603	33,519,143	34,357,122	35,216,050
Other Metered Sewage	78,400	80,752	83,175	85,670	88,240	90,887	93,614	96,422	99,315	102,294	105,363	108,524	111,780	115,133	118,587	122,145	125,809	129,583	133,470	137,474	141,598
Total Wastewater Rate Revenue	17,262,800	20,783,078	21,182,797	21,705,301	22,356,441	23,027,134	23,717,948	24,429,486	25,162,371	25,917,242	26,694,759	27,495,602	28,320,470	29,170,084	30,045,186	30,946,542	31,874,938	32,831,186	33,652,613	34,494,596	35,357,648
Wastewater Rate Revenue % Increase Year over Year (including																					
consumption)	7.8%	20.4%	1.9%	2.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	2.5%	2.5%	2.5%
Sewer Surcharge Rate % Increase Year																					
Over Year	0%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other Metered Sewage and Program Revo	enue increase by	3% annually.																			
Note 2																					
Operating Expenses will increase by 2.5%	annually.																				
,	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Note 3 Utilities charges will increase by 7% for th	o novt 4 voors on	1 2 E% thoroafter																			
Othicles charges will increase by 7% for th	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
	7.0%	7.0%	7.0%	7.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%

Note 4

Storm sewer capital other than Pollution Prevention Control is currently tax supported capital. Therefore projected tax supported storm sewer capital revenue and expenses have a net zero impact on wastewater.

These figures have been included for information purposes given a portion of wastewater operations includes some work related to storm sewer and have been increased by 1.9% annually for inflation.

Note 5

Wastewater capital expenditures for 2014 are in accordance with the 2014 Rate Supported Budget. Projected wastewater capital expenditures have been provided by the Environment Division upon review of future capital requirements and have been increased by 1.9% annually for inflation. Pollution Prevention Control is included in the Wastewater Capital Budget but the nature of the project results in the construction of new storm sewers in areas where combined storm sewers exist.

Refer to Note 4 regarding tax supported storm sewer capital.

Note 6

Capital carryforward represents capital projects budgeted and approved by Council in a prior year but not yet spent. For the purposes of this long-term plan, the capital carryforward existing at the end of 2013 has been allocated over a 3 year time frame (completed by 2016).

All other capital expenditures have been included in the year they are budgeted for only.

Note 7

All new debt will be incurred over a term of 20 years with semi-annual payments and an interest rate of 4% compounded semi-annually. Due to the timing between the debt application and receipt of the proceeds, the debt is temporarily financed by the Municipality. Interest on temporary financing will be charged at 4% but at a rate of 50% for the first year and 100% for the second year.

Note 8

Interest earned on the reserve fund balance has not been calculated.

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Existing Debt																					
OILC - \$20,000,000																					
2004, maturing 2024																					
Outstanding Balance, beg of year	11,000,000	10,000,000	9,000,000	8,000,000	7,000,000	6,000,000	5,000,000	4,000,000	3,000,000	2,000,000	1,000,000	-	-	-	-	-	-	-	-	-	-
Principal Interest	1,000,000 283,020	1,000,000 257,380	1,000,000 231,630	1,000,000 204,580	1,000,000 179,120	1,000,000 151,380	1,000,000 125,380	1,000,000 98,980	1,000,000 72,580	1,000,000 46,180	1,000,000 19,960	-	-	-	-	-	-	-	-	-	-
Total Outstanding, end of year	10,000,000	9,000,000	8,000,000	7,000,000	6,000,000	5,000,000	4,000,000	3,000,000	2,000,000	1,000,000	19,900						<u> </u>				 -
rotal outstanding, and or year	10,000,000	3,000,000	0,000,000	7,000,000	0,000,000	3,000,000	4,000,000	3,000,000	2,000,000	1,000,000											
OILC - \$23,000,000																					
2005, maturing 2025																					
Outstanding Balance, beg of year	13,800,000	12,650,000	11,500,000	10,350,000	9,200,000	8,050,000	6,900,000	5,750,000	4,600,000	3,450,000	2,300,000	1,150,000	-	-	-	-	-	-	-	-	-
Principal	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	-	-	-	-	-	-	-	-	-
Interest	324,760	297,920	270,960	242,490	215,910	186,560	159,340	131,630	103,910	76,200	48,820	20,730	-	-	-	-	-	-	-	-	
Total Outstanding, end of year	12,650,000	11,500,000	10,350,000	9,200,000	8,050,000	6,900,000	5,750,000	4,600,000	3,450,000	2,300,000	1,150,000	-	-	-	-	-	-	-	-	-	-
Green Fund (FCM) - \$6,720,000																					
2009, maturing 2016																					
Outstanding Balance, beg of year	2,400,000	1,440,000	480,000	_	-	_	-	_	_	_	-	_	-	-	_	-	-	_	_	_	_
Principal	960,000	960,000	480,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest	52,730	30,170	5,640	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Outstanding, end of year	1,440,000	480,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OILC - \$8,882,924																					
2011, maturing 2026	7 (00 (00	7.106.400	C F14 200	F 022 000	F 220 000	4 727 600	4 4 4 5 4 0 0	2 552 200	2.061.000	2 260 000	1 776 600	1 104 400	F02 200								
Outstanding Balance, beg of year Principal	7,698,600 592,200	7,106,400 592,200	6,514,200 592,200	5,922,000 592,200	5,329,800 592,200	4,737,600 592,200	4,145,400 592,200	3,553,200 592,200	2,961,000 592,200	2,368,800 592,200	1,776,600 592,200	1,184,400 592,200	592,200 592,200	-	-	_	-	-	-	-	-
Interest	255,190	236,520	214,580	195,140	175,130	155,110	136,190	114,780	94,820	75,050	55,200	35,010	15,140	-	-	-	-	-	-	-	-
Total Outstanding, end of year	7,106,400	6,514,200	5,922,000	5,329,800	4,737,600	4,145,400	3,553,200	2,961,000	2,368,800	1,776,600	1,184,400	592,200	-	-	-	-	_	_	-	_	_
	1,200,100	2,021,200	0,0==,000	2,222,222	.,,	1,212,122	2,222,222	_,,	_,,	_,,	_, ,,	,									
_																					
Total Existing Debt Outstanding, beg of																					
year	34,898,600	31,196,400	27,494,200	24,272,000	21,529,800	18,787,600	16,045,400	13,303,200	10,561,000	7,818,800	5,076,600	2,334,400	592,200	-	-	-	-	-	-	-	-
Principal Repayments	3,702,200	3,702,200	3,222,200	2,742,200	2,742,200	2,742,200	2,742,200	2,742,200	2,742,200	2,742,200	2,742,200	1,742,200	592,200	-	-	-	-	-	-	-	-
Interest Total Existing Debt Outstanding, end of	915,700	821,990	722,810	642,210	570,160	493,050	420,910	345,390	271,310	197,430	123,980	55,740	15,140		-	-		-	-		
year	31,196,400	27,494,200	24,272,000	21,529,800	18,787,600	16,045,400	13,303,200	10,561,000	7,818,800	5,076,600	2,334,400	592,200	_	_	_	_	_	_	_	_	_
,	01,150,100	27,151,200	2 1,27 2,000	22,023,000	10,707,000	20,0 .0, .00	13,503,100	10,001,000	7,020,000	3,070,000	2,00 1,100	332,200									
New Debt																					
Total New Debt Outstanding, beg of year	-	6,000,000	10,200,000	13,675,000	15,450,000	17,225,000	20,375,000	23,400,000	27,225,000	30,850,000	32,225,000	33,350,000	32,325,000	31,150,000	29,925,000	28,650,000	27,325,000	25,950,000	24,525,000	23,050,000	21,525,000
New Debt Additions	6,000,000	4,500,000	4,000,000	2,500,000	2,500,000	4,000,000	4,000,000	5,000,000	5,000,000	3,000,000	3,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Principal	-	300,000	525,000	725,000	725,000	850,000	975,000	1,175,000	1,375,000	1,625,000	1,875,000	2,025,000	2,175,000	2,225,000	2,275,000	2,325,000	2,375,000	2,425,000	2,475,000	2,525,000	2,575,000
Interest	120,000	326,301	482,242	589,744	662,425	760,523	885,070	1,024,356	1,175,786	1,278,051	1,331,795	1,335,325	1,290,919	1,243,995	1,194,901	1,143,696	1,089,875	1,034,308	976,847	917,060	855,927
Total New Debt Outstanding, end of year	6,000,000	10,200,000	13,675,000	15,450,000	17,225,000	20,375,000	23,400,000	27,225,000	30,850,000	32,225,000	33,350,000	32,325,000	31,150,000	29,925,000	28,650,000	27,325,000	25,950,000	24,525,000	23,050,000	21,525,000	19,950,000
	0,000,000	10,200,000	13,073,000	13,430,000	17,223,000	20,373,000	23,400,000	27,223,000	30,030,000	32,223,000	33,330,000	32,323,000	31,130,000	25,525,000	20,030,000	27,323,000	23,330,000	24,323,000	23,030,000	21,323,000	13,330,000
Total Debt																					
Total Debt Outstanding, beg of year	34,898,600	37,196,400	37,694,200	37,947,000	36,979,800	36,012,600	36,420,400	36,703,200	37,786,000	38,668,800	37,301,600	35,684,400	32,917,200	31,150,000	29,925,000	28,650,000	27,325,000	25,950,000	24,525,000	23,050,000	21,525,000
New Debt Additions	6,000,000	4,500,000	4,000,000	2,500,000	2,500,000	4,000,000	4,000,000	5,000,000	5,000,000	3,000,000	3,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Principal	3,702,200	4,002,200	3,747,200	3,467,200	3,467,200	3,592,200	3,717,200	3,917,200	4,117,200	4,367,200	4,617,200	3,767,200	2,767,200	2,225,000	2,275,000	2,325,000	2,375,000	2,425,000	2,475,000	2,525,000	2,575,000
Interest	1,035,700	1,148,291	1,205,052	1,231,954	1,232,585	1,253,573	1,305,980	1,369,746	1,447,096	1,475,481	1,455,775	1,391,065	1,306,059	1,243,995	1,194,901	1,143,696	1,089,875	1,034,308	976,847	917,060	855,927
Total Debt Outstanding, end of year	37,196,400	37,694,200	37,947,000	36,979,800	36,012,600	36,420,400	36,703,200	37,786,000	38,668,800	37,301,600	35,684,400	32,917,200	31,150,000	29,925,000	28,650,000	27,325,000	25,950,000	24,525,000	23,050,000	21,525,000	19,950,000
Own Course Bouenuss																					
Own Source Revenues	17 194 400	20 702 226	21 000 622	21 610 621	22 269 201	22 026 247	22 624 224	24 222 064	25 062 056	25 914 049	26 590 206	27,387,078	20 200 600	20.054.051	20 026 500	20 924 207	21 740 120	22 701 602	22 510 1/2	24 257 122	25 216 050
Sewer Surcharge Other Metered Sewage	17,184,400 78,400	20,702,326 80,752	21,099,622 83,175	21,619,631 85,670	22,268,201 88,240	22,936,247 90,887	23,624,334 93,614	24,333,064 96,422	25,063,056 99,315	25,814,948 102,294	26,589,396 105,363	108,524	28,208,690 111,780	29,054,951 115,133	29,926,599 118,587	30,824,397 122,145	31,749,129 125,809	32,701,603 129,583	33,519,143 133,470	34,357,122 137,474	35,216,050 141,598
Other (including transfer from Capital)	761,900	538,316	546,565	555,014	563,669	572,533	581,613	590,915	600,443	610,204	620,203	630,447	640,943	651,696	662,713	674,001	685,567	697,418	709,561	722,005	734,756
	18,024,700	21,321,394	21,729,362	22,260,315	22,920,110	23,599,667	24,299,561	25,020,401	25,762,814	26,527,446	27,314,962	28,126,049	28,961,413	29,821,780	30,707,899	31,620,543	32,560,505	33,528,604	34,362,174	35,216,601	36,092,404
			• •	•		• •	• •	• •	• •	• •						• •	•	• •			•
Wastewater Debt Service Ratio	26.29%	24.16%	22.79%	21.11%	20.51%	20.53%	20.67%	21.13%	21.60%	22.03%	22.23%	18.34%	14.06%	11.63%	11.30%	10.97%	10.64%	10.32%	10.05%	9.77%	9.51%